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88-00
U.D.

Applicant: Cooper, J. Carl
Serial No.: 09/545,529
File Date: April 7, 2000
Invention: Audio to Video Timing Measurement
for MPEG Type Television Systems

Examiner:
Art Unit: 2711
Docket: JCC400A

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June 26, 2000
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ASSISTANT COMMISSIONER OF PATENTS
Washington, D.C. 20231

Information Disclosure Statement Submission

Dear Sir:


Applicant submits herewith an Information Disclosure Statement listing a pertinent prior art article by applicant. The article describes the monitoring of audio to video timing by the insertion into the video signal of a timing signal consisting of sampled low pass filtered audio. At the top of the middle column of page 697 it is stated: "In the timing encoder, audio is low-pass filtered and then sampled to form the timing signal, which is inserted into the vertical blanking interval on a frame-by-frame basis". The timing signal is recovered from the video and compared with a new version timing signal taken from the audio after the transmission of the two signals. By comparing the recovered and the new version timing signals, the relative delay of the audio and video is determined. The examiner's attention is called to Figures 3 and 4 and their description.

Applicant notes that while the system shown in the article is similar to applicant's

invention, it does not show several particular inventive features thereof. For example, the article does not show marking the first signal with a marker in response to the occurrence of a particular event in the second signal as in the claims, rather the samples of the low pass filtered audio are inserted in the vertical interval. As a further example, there is no detection of a particular event at the encoding end, although there is detection of silence at the decoding end. In addition, there is no suggestion to use watermarking to encode the timing signal in the active video as recited in some of the claims.

It is respectfully requested that this application pass to examination.

Sincerely,



J. Carl Cooper

Reg. 34,568